

AMENDMENTS TO THE CLAIMS:

Please amend the claims as follows:

1. (Currently amended) A method of [the] production of a nanoparticle ~~which comprises a step of forming a nanoparticle of a compound semiconductor in a cavity part of a protein, in a solution containing the protein having the cavity part therein and an ion of an element to be a material of the compound semiconductor,~~

~~wherein said method comprises a step of forming a nanoparticle of a group II—group VI compound semiconductor in the cavity part of the protein, in a solution containing the protein, a group II element ion, and a group VI element ion, and~~

~~wherein said solution contains a complex ion having the group II element as a central metal including a protein having a cavity inside and one of CdSe, CdS, ZnSe and ZnS filled in the cavity, the method comprising the step of:~~

~~filling the cavity with one of CdSe, CdS, ZnSe and ZnS by mixing the protein including the cavity inside, a complex ion $[M(NH_3)_4]^{2+}$ (M being one of Cd and Zn), and H_2NCXNH_2 (X being one of S and Se) with water, wherein~~

~~the protein includes a channel connecting between the cavity and the outside of the protein and~~

~~an inner spherical surface of the protein has a negative electric charge.~~

2-8. (Cancelled)

9. (Currently amended) The method of [[the]] production of a nanoparticle according to claim [[8]] 1, wherein said X is Se.

10. (Currently amended) The method of [[the]] production of a nanoparticle according to claim [[8]] 1, wherein said X is S.

11-12. (Cancelled)

13. (Currently amended) The method of [[the]] production of a nanoparticle according to claim 1, wherein said protein is at least one of apoferritin, Dps protein, CCMV protein or TMV protein.

14. (Currently amended) The method of [[the]] production of a nanoparticle according to claim 1, wherein said method further comprises a step of eliminating the protein by a heat treatment after ~~forming said nanoparticle~~ filling the cavity with one of CdSe, CdS, ZnSe and ZnS.

15-17. (Cancelled)

18. (New) The method of production of a nanoparticle according to claim 1, wherein said M is Cd.

19. (New) The method of production of a nanoparticle according to claim 1, wherein said M is Zn.